

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

To:

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Date of mailing
(day/month/year) 03.01.2005

Applicant's or agent's file reference
SPG/P101012WO

IMPORTANT NOTIFICATION

International application No.
PCT/GB 03/04095

International filing date (day/month/year)
29.09.2003

Priority date (day/month/year)
01.10.2002

Applicant
GRAY MATTER (ALPHA) LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



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114/05
28/11/05

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/04095

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

8-39 as originally filed

1-7 filed with telefax on 11.11.2004

Drawings, Sheets

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

see separate sheet

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 2

because:

☒ the said international application, or the said claims Nos. 2 relate to the following subject matter which does not require an international preliminary examination (specify):

see separate sheet

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

☐ restricted the claims.

☐ paid additional fees.

☐ paid additional fees under protest.

☒ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

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3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with.

☒ not complied with for the following reasons:

see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

☐ all parts.

☒ the parts relating to claims Nos. 1-14, 16-28, 34 .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1, 3-14, 16-28, 34
	No: Claims	
Inventive step (IS)	Yes: Claims	1, 3-14, 16-28, 34
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1, 3-14, 16-28, 34
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
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Re Item I

1. Due to the lack of unity and the fact that the applicant has neither restricted the claims nor pay additional examination fees, this international preliminary examination report is based on the parts of the present application relating to claims 1-34 only.

Re Item III

2. Claim 2 contains references to another patent document. This render the subject-matter of said claim unclear (Article 6 PCT), since it leaves the reader in doubt as to the extent of the scope of protection defined thereby. Consequently, claim 2 has not been subject to this international preliminary examination report.

Re Item IV

3. First obvious lack of unity

3.1 The separate groups of inventions are:

I1 : Claims 1-35

A vehicle braking assembly

I2 : Claims 36-38

A vehicle wheel assembly adapted to act as a power generator

I3 : Claim 39

A vehicle braking assembly or wheel assembly substantially as described with reference to the accompanying drawings and examples

- 3.2 They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) since there is no technical relationship among these groups of inventions which could involve one or more of the same or corresponding special technical features (Rule 13.2 PCT).

4. Further lack of unity

- 4.1 The common features of the first group I1 of inventions defined in independent claims 1 and 15 are the features of the preamble of said claims, i.e. a vehicle braking assembly comprising a braking member, blocking means adapted to prevent the braking member from moving and trigger means adapted to activate the braking member.

- 4.2 These common features are commonly well known features for the skilled person and

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EXAMINATION REPORT - SEPARATE SHEET**

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are already disclosed in the documents US-A-5 881 846 (see abstract), EP-A-1 101 685 (see abstract and column 1, lines 32-47) cited in the search report. These common features can therefore not serve as a link between the inventions **I11** and **I12** (see paragraph below) so as to form a single general inventive concept. The requisite unity of invention in the sense of Rule 13.1 PCT therefore no longer exists.

4.3 The two different inventions **I11 and **I12** are the following:**

I11 : Claims 1-14, 16-28, 34

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means being operable by a coded message passed by a separate transmitter

I12: Claims 15-27, 29-33, 35

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means comprising a latch adapted to engage with a toothed portion of the body of the wheel

5. It appears therefore that the application contains four different inventions **I11, **I12**, **I2** and **I3** which are not linked by a single general inventive concept. These inventions are the following:**

I11 : Claims 1-14, 16-28, 34

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means being operable by a coded message passed by a separate transmitter and said assembly being provided with an EMR sensor

I12: Claims 15-27, 29-33, 35

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means comprising a latch adapted to engage with a toothed portion of the body of the wheel

I2 : Claims 36-38

A vehicle wheel assembly adapted to act as a power generator

I3 : Claim 39

A vehicle braking assembly or wheel assembly substantially as described with reference to the accompanying drawings and examples

Re Item V

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The subject-matter of claims 1 and 3-34 satisfy the criteria of novelty, inventive step and industrial applicability. The reasons are the following:

6. Claim 1

- 6.1 The document US-A-5 881 846 (D1) is regarded as the closest prior art to the subject-matter of claim 1 and discloses (see D1: column 2, lines 3-20; column 4, lines 33-42, column 5, lines 10-33, figures 1 and 6-8) a vehicle braking assembly for a wheel, said assembly comprising:

a braking member (20) arranged to move relative to the main body of the wheel (10) between an inoperative and an operative position;

blocking means (22) adapted to prevent the braking member (20) from moving to an operative position (see D1: column 4, lines 38-41); and

trigger means (24) adapted to activate the braking member (20) to move to an operative position;

wherein said trigger means (24) are operable by a coded message passed by a separate transmitter (see figure 7) and said assembly (see column 5, lines 30-34) is provided with an EMR sensor (56).

- 6.2 The subject-matter of claim 1 differs from this vehicle braking assembly for a wheel in that said blocking means is arranged to reset the braking member to an inoperative position without manual interference.

The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

- 6.3 The problem to be solved by the present invention may therefore be regarded as to simplify the resetting of the braking member to an inoperative position.

- 6.4 The constructive solution defined in claim 1 of the present application is not disclosed in its present form in any of the documents cited in the search report.

Thus, the subject-matter of claim 1 involves an inventive step (Article 33(3) PCT).

7. Dependent claims 3-14, 16-28, 34

Claims 3-14, 16-28, 34 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

8. Further remarks

- 8.1 The last feature of claim 1, i.e. "the blocking means is arranged to reset the braking

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member to an operative position without manual interference", intends to define the invention by claiming the underlying problem in functional terms (see the PCT Guidelines, Chapter 5, paragraphs 5.35, 5.41 and 5.56), whereas it can be defined more precisely by technical features (see, e.g. page 4, line 29 - page 5, line 4). The subject-matter of claim 1 is therefore not clear (Article 6 PCT).

- 8.2 Contrary to Rules 6.2 b) and 6.3b)i) and ii) PCT, independent claim 1 is not in the two-part form, nor have the claims been provided with reference numbers.

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JC17 Rec'd PCT/PTO 30 MAR 2005

CLAIMS

1. A vehicle braking assembly for a wheel which comprises a braking member arranged to move relative to the main body of the wheel between an inoperative and
5 an operative position, blocking means adapted to prevent the braking member from moving to an operative position and trigger means adapted to activate the braking member to move to an operative position wherein the trigger means is operable by a coded message passed by a separate transmitter as electromagnetic radiation and the assembly is provided with an EMR sensor and the blocking means is arranged to
10 reset the braking member to an inoperative position without manual interference.
2. A vehicle braking assembly device according to Claim 1 characterised in that the brake foot is the same or similar to that described in European Patent No. 1 101 685.
- 15 3. A vehicle braking assembly device according to Claim 1 characterised in that the wheel is provided with a circumferential brake guide.
4. A vehicle braking assembly device according to Claim 3 characterised in that
20 the circumferential brake guide is in the form of a slot or groove.
5. A vehicle braking assembly device according to Claim 3 characterised in that the brake guide is provided on only a portion of the circumference of the wheel.
- 25 6. A vehicle braking assembly device according to Claim 3 characterised in that the circumferential brake guide is formed by the mating of a pair of facing wheel members.
7. A vehicle braking assembly device according to Claim 3 characterised in that
30 each of the wheel member comprise a wheel and a wheel body, the diameter of the wheel body being less than the diameter of the wheel.